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SITE SUMMARY AND RECOMMENDATION

The W. A. Cleary Chemical Corp. (W.A. Cleary) site (CERCLIS ID No. NJD002164457) is a 136-acre property located at 1049 Somerset Street in a mixed industrial/commercial/residential portion of Franklin Township, Somerset County, New Jersey. CERCLIS list notes that the site is located in Congressional District No. 5; however, the actual district is No. 7. Approximately 8 acres of the property are utilized for manufacturing purposes; the remainder of the site is utilized as a golf course. The site is bordered on the north by a railroad right-of-way; on the east by Route 27, commercial businesses and industrial businesses; on the south by residences and commercial businesses; and on the west by an undeveloped land.

From 1944 to circa 1985, the manufacturing portion of the property was utilized for the production of food additives and agricultural chemicals, including pesticides, herbicides, and fungicides. W. A. Cleary has been the sole owner/operator of the manufacturing facility; only food additives are currently produced at the site. From 1946 through 1977, part of the agricultural chemical manufacturing occurred in the "still area." During various periods the still area, located near the southern boundary of the site, was utilized for the partial production of phenylmercuric acetate, phenylmercuric oleate, mercuric naphthanate, and disodium methyl arsenate.

Other on-site features include an office, a chemical plant building, a food additive building, a former clay-lined chemical lagoon and an infiltration pond. The chemical lagoon was reportedly subject to overflowing. The on-site lagoons were connected through a series of ditches and underground pipes. Water from the pond was previously utilized for golf course irrigation; the golf course currently uses municipal water for irrigation purposes. The facility previously possessed an NPDES Permit, allowing the intermittent discharge of food additive wastewater to Mile Run. This wastewater reportedly consisted primarily of vegetable oils and lecithin. Past process materials include: mercuric oxide, benzene, carbon tetrachloride, acetic acid, ammonia, cadmium chloride solution, cadmium oxide, and Thiram. Contamination of on-site soils and the underlying groundwater is attributed to the former still area and chemical plant operations.

In June 1981, the NJDEP issued a Directive to W. A. Cleary that required the submission of an NPDES permit application for its food additive and chemical lagoons. In October 1981, during monitoring well placement, the NJDEP discovered an area of contaminated soil near the chemical lagoon. Subsequent soil sample analytical data revealed the presence of elevated concentrations of arsenic, cadmium, and mercury. In 1982, W.A. Cleary entered into an ACO agreement with the NJDEP. The ACO required the installation and sampling of monitoring wells, as well as the removal of all wastewater and sludge from the chemical lagoon.

In 1983, the NJDEP conducted a PA of the W. A. Cleary site. The PA Report cited the presence of elevated concentrations of arsenic, cadmium, and mercury in on-site soils. In addition, analytical data of a chemical lagoon sample indicated the presence of these metals, as well as chloroform and 1,1,2-trichloroethane.

Numerous media sampling events have occurred at the site property, as well as at nearby residential wells. In 1986, the chemical lagoon liquids, sludges, and soils were removed and disposed off site. In addition, the facility also excavated and disposed the top one foot of soil across approximately 2.1 acres

of the site. From 1986 to 1988 DRAI, consultant to W. A. Cleary, conducted a hydrogeologic and soils investigation at the site. Analytical data of associated monitoring well samples indicated the presence of elevated levels of arsenic.

In addition to soil and waste removal actions, the facility installed a groundwater treatment system to address the presence of elevated levels of arsenic in monitoring well samples. W. A. Cleary maintains a current MCUA Non-Domestic Wastewater Discharge Permit, which allows the facility to discharge a maximum of 4,500 gallons of treated groundwater to the MCUA system per day. Groundwater pre-treatment procedures include: equalization, settling, and filtration via bag filters and activated carbon units. Three of the existing 23 on-site wells are utilized in this pump-and-treat remediation. In July 1999, the facility submitted a Draft Deed Notice to the NJDEP. The notice identified seven zones of soil contamination, each of which has been previously excavated. Two of the zones had been excavated to the top of the bedrock unit. In addition to restricting the property to non-residential use, the notice proposed the following engineering controls for the areas of excavation: the placement and compaction of backfilled materials; and soil capping of backfilled areas via re-seeding.

On 4 and 5 November 1999, the Region II START conducted both an off-site and on-site reconnaissance at the facility to determine current site conditions, as well as to determine the need for any immediate response action. Region II START personnel noted that the culvert connecting the lagoon to the golf course drainage swale had been closed with cement. The NJDEP granted W. A. Cleary permission to utilized clean fill derived from the golf course. During the inspection the lagoon, which has not been backfilled to date, was noted to contain rainwater. The former chemical plant is currently used for golf course pesticide storage. Twelve people are employed at the facility.

Although a release of site-attributable contaminants to groundwater has occurred, primary drinking water supplies for communities within the site vicinity are obtained from sources greater than 4 miles from the site. The site is situated within two drainage areas basins. An estimated 5 acres of the western portion of the property drains westward toward an unnamed tributary of Six Mile Run. Six Mile Run ultimately discharges to the Millstone River. The eastern remainder of the site is currently expected to drain northward toward Mile Run and eastward toward the highway storm sewers. Analytical data indicate the presence of contaminants, particularly metals, in the on-site soils; however, the unnamed tributary of Six Mile Run, the nearest downstream surface water body, is located 0.7 mile west of the site. Further, the nearest known sensitive environment is located approximately 1.4 miles downstream of this PPE. There are no residences, schools, or day care facilities within 200 feet of the facility property.

Previous and ongoing groundwater and soil remediation efforts, as well as existing environmental restrictions on the entire property, have mitigated environmental threats due to direct contact with and overland migration of on-site contamination.

The W. A. Cleary site was evaluated using PREscore (version 4.1). Based upon preexisting and updated information, a score of 3.20 was reached using the revised HRS. Based on an evaluation of the above conditions, a recommendation of **NO FURTHER REMEDIAL ACTION PLANNED (NFRAP)** is given for the W. A. Cleary site.

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PREScore 4.1
HRS DOCUMENTATION RECORD
W.A. Cleary Chemical Corp. - 12/29/99

1. Site Name: W.A. Cleary Chemical Corp.
   (as entered in CERCLIS)

2. Site CERCLIS Number: NJD002164457

3. Site Reviewer: K. Campbell

4. Date: 12/21/99

5. Site Location: Somerset (Franklin Twp)/Somerset, NJ
   (City/County,State)

6. Congressional District: 07

7. Site Coordinates: Multiple

   Latitude: 40°28'41. Longitude: 074°29'33.

	Score
Ground Water Migration Pathway Score (Sgw)	3.60
Surface Water Migration Pathway Score (Ssw)	3.82
Soil Exposure Pathway Score (Ss)	0.60
Air Migration Pathway Score (Sa)	3.63

Site Score	3.20

NOTE

Site names, and references to specific parcels or properties, are provided for general identification purposes only. Knowledge regarding the extent of sites will be refined as more information is developed during the RI/FS and even during implementation of the remedy.

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PREScore 4.1
WASTE QUANTITY
W.A. Cleary Chemical Corp. - 12/29/99

1. WASTESTREAM QUANTITY SUMMARY TABLE, SOURCE: Contaminated soil

a. Wastestream ID	
b. Hazardous Constituent Quantity (C) (lbs.)	0.00
c. Data Complete?	NO
d. Hazardous Wastestream Quantity (W) (lbs.)	0.00
e. Data Complete?	NO
f. Wastestream Quantity Value (W/5,000)	0.00E+00

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PREScore 4.1
WASTE QUANTITY
W.A. Cleary Chemical Corp. - 12/29/99

2. SOURCE HAZARDOUS WASTE QUANTITY FACTOR TABLE

a. Source ID		Contaminated soil	
b. Source Type		Contaminated Soil	
c. Secondary Source Type		N.A.	
d. Source Vol.(yd3/gal)	Source Area (ft2)	0.00	348480.00
e. Source Volume/Area Value		1.02E+01	
f. Source Hazardous Constituent Quantity (HCQ) Value (sum of 1b)		0.00E+00	
g. Data Complete?		NO	
h. Source Hazardous Wastestream Quantity (WSQ) Value (sum of 1f)		0.00E+00	
i. Data Complete?		NO	
k. Source Hazardous Waste Quantity (HWQ) Value (2e, 2f, or 2h)		1.02E+01	

Source Hazardous Substances	Depth (feet)	Liquid	Concent.	Units
Arsenic	< 2	NO	9.5E+02	ppm
Cadmium	< 2	NO	1.6E+03	ppm
Mercury	< 2	NO	2.5E+04	ppm

PREScore 4.1
WASTE QUANTITY
W.A. Cleary Chemical Corp. - 12/29/99

3. SITE HAZARDOUS WASTE QUANTITY SUMMARY

No.	Source ID	Migration Pathways	Vol. or Area Value (2e)	Constituent or Wastestream Value (2f,2h)	Hazardous Waste Qty. Value (2k)
1	Contaminated soil	GW-SW-SE-A	1.02E+01	0.00E+00	1.02E+01

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PREScore 4.1
WASTE QUANTITY
W.A. Cleary Chemical Corp. - 12/29/99

4. PATHWAY HAZARDOUS WASTE QUANTITY AND WASTE CHARACTERISTICS SUMMARY TABLE

Migration Pathway	Contaminant Values		HWQVs*	WCVs**
Ground Water	Toxicity/Mobility	1.00E+04	10	18
SW: Overland Flow, DW	Tox./Persistence	1.00E+04	10	18
SW: Overland Flow, HFC	Tox./Persis./Bioacc.	2.00E+08	10	180
SW: Overland Flow, Env	Etox./Persis./Bioacc.	2.00E+08	10	180
SW: GW to SW, DW	Tox./Persistence	1.00E+02	10	6
SW: GW to SW, HFC	Tox./Persis./Bioacc.	1.00E+05	10	32
SW: GW to SW, Env	Etox./Persis./Bioacc.	1.00E+04	10	18
Soil Exposure:Resident	Toxicity	1.00E+04	10	18
Soil Exposure: Nearby	Toxicity	1.00E+04	10	18
Air	Toxicity/Mobility	2.00E+03	10	10

* Hazardous Waste Quantity Factor Values
** Waste Characteristics Factor Category Values

Note: SW = Surface Water
GW = Ground Water
DW = Drinking Water Threat
HFC = Human Food Chain Threat
Env = Environmental Threat

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PREScore 4.1
GROUND WATER MIGRATION PATHWAY SCORESHEET
W.A. Cleary Chemical Corp. - 12/29/99

GROUND WATER MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release to an Aquifer Aquifer: Brunswick Formation		
1. Observed Release	550	550
2. Potential to Release		
2a. Containment	10	10
2b. Net Precipitation	10	6
2c. Depth to Aquifer	5	5
2d. Travel Time	35	35
2e. Potential to Release [lines 2a(2b+2c+2d)]	500	460
3. Likelihood of Release	550	550
Waste Characteristics		
4. Toxicity/Mobility	*	1.00E+04
5. Hazardous Waste Quantity	*	10
6. Waste Characteristics	100	18
Targets		
7. Nearest Well	50	2.00E+01
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	5.00E+00
8d. Population (lines 8a+8b+8c)	**	5.00E+00
9. Resources	5	5.00E+00
10. Wellhead Protection Area	20	0.00E+00
11. Targets (lines 7+8d+9+10)	**	3.00E+01
12. Targets (including overlaying aquifers)	**	3.00E+01
13. Aquifer Score	100	3.60
GROUND WATER MIGRATION PATHWAY SCORE (Sgw)	100	3.60

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.1
SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
W.A. Cleary Chemical Corp. - 12/29/99

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release by Overland Flow		
2a. Containment	10	10
2b. Runoff	25	1
2c. Distance to Surface Water	25	6
2d. Potential to Release by Overland Flow [lines 2a(2b+2c)]	500	70
3. Potential to Release by Flood		
3a. Containment (Flood)	10	0
3b. Flood Frequency	50	0
3c. Potential to Release by Flood (lines 3a x 3b)	500	0
4. Potential to Release (lines 2d+3c)	500	70
5. Likelihood of Release	550	70
Waste Characteristics		
6. Toxicity/Persistence	*	1.00E+04
7. Hazardous Waste Quantity	*	10
8. Waste Characteristics	100	18
Targets		
9. Nearest Intake	50	0.00E+00
10. Population		
10a. Level I Concentrations	**	0.00E+00
10b. Level II Concentrations	**	0.00E+00
10c. Potential Contamination	**	0.00E+00
10d. Population (lines 10a+10b+10c)	**	0.00E+00
11. Resources	5	0.00E+00
12. Targets (lines 9+10d+11)	**	0.00E+00
13. DRINKING WATER THREAT SCORE	100	0.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.1
SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
W.A. Cleary Chemical Corp. - 12/29/99

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT	Maximum Value	Value Assigned
Likelihood of Release		
14. Likelihood of Release (same as line 5)	550	70
Waste Characteristics		
15. Toxicity/Persistence/Bioaccumulation	*	2.00E+08
16. Hazardous Waste Quantity	*	10
17. Waste Characteristics	1000	180
Targets		
18. Food Chain Individual	50	2.00E+01
19. Population		
19a. Level I Concentrations	**	0.00E+00
19b. Level II Concentrations	**	0.00E+00
19c. Pot. Human Food Chain Contamination	**	3.33E-03
19d. Population (lines 19a+19b+19c)	**	3.33E-03
20. Targets (lines 18+19d)	**	2.00E+01
21. HUMAN FOOD CHAIN THREAT SCORE	100	3.06

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

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PREScore 4.1
SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
W.A. Cleary Chemical Corp. - 12/29/99

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT	Maximum Value	Value Assigned
Likelihood of Release		
22. Likelihood of Release (same as line 5)	550	70
Waste Characteristics		
23. Ecosystem Toxicity/Persistence/Bioacc.	*	2.00E+08
24. Hazardous Waste Quantity	*	10
25. Waste Characteristics	1000	180
Targets		
26. Sensitive Environments		
26a. Level I Concentrations	**	0.00E+00
26b. Level II Concentrations	**	0.00E+00
26c. Potential Contamination	**	5.00E+00
26d. Sensitive Environments (lines 26a+26b+26c)	**	5.00E+00
27. Targets (line 26d)	**	5.00E+00
28. ENVIRONMENTAL THREAT SCORE	60	0.76
29. WATERSHED SCORE	100	3.82
30. SW: OVERLAND/FLOOD COMPONENT SCORE (Sof)	100	3.82

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.1
GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
W.A. Cleary Chemical Corp. - 12/29/99

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT	Maximum Value	Value Assigned
Likelihood of Release to Aquifer Aquifer: Surficial deposits		
1. Observed Release	550	0
2. Potential to Release		
2a. Containment	10	10
2b. Net Precipitation	10	6
2c. Depth to Aquifer	5	5
2d. Travel Time	35	35
2e. Potential to Release [lines 2a(2b+2c+2d)]	500	460
3. Likelihood of Release	550	460
Waste Characteristics		
4. Toxicity/Mobility/Persistence	*	1.00E+02
5. Hazardous Waste Quantity	*	10
6. Waste Characteristics	100	6
Targets		
7. Nearest Intake	50	0.00E+00
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	0.00E+00
8d. Population (lines 8a+8b+8c)	**	0.00E+00
9. Resources	5	0.00E+00
10. Targets (lines 7+8d+9)	**	0.00E+00
11. DRINKING WATER THREAT SCORE	100	0.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.1
GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
W.A. Cleary Chemical Corp. - 12/29/99

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT	Maximum Value	Value Assigned
Likelihood of Release		
12. Likelihood of Release (same as line 3)	550	460
Waste Characteristics		
13. Toxicity/Mobility/Persistence/Bioacc.	*	1.00E+05
14. Hazardous Waste Quantity	*	10
15. Waste Characteristics	1000	32
Targets		
16. Food Chain Individual	50	0.00E+00
17. Population		
17a. Level I Concentrations	**	0.00E+00
17b. Level II Concentrations	**	0.00E+00
17c. Pot. Human Food Chain Contamination	**	0.00E+00
17d. Population (lines 17a+17b+17c)	**	0.00E+00
18. Targets (lines 16+17d)	**	0.00E+00
19. HUMAN FOOD CHAIN THREAT SCORE	100	0.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.1
GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
W.A. Cleary Chemical Corp. - 12/29/99

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT	Maximum Value	Value Assigned
Likelihood of Release		
20. Likelihood of Release (same as line 3)	550	460
Waste Characteristics		
21. Ecosystem Tox./Mobility/Persist./Bioacc.	*	1.00E+04
22. Hazardous Waste Quantity	*	10
23. Waste Characteristics	1000	18
Targets		
24. Sensitive Environments		
24a. Level I Concentrations	**	0.00E+00
24b. Level II Concentrations	**	0.00E+00
24c. Potential Contamination	**	0.00E+00
24d. Sensitive Environments (lines 24a+24b+24c)	**	0.00E+00
25. Targets (line 24d)	**	0.00E+00
26. ENVIRONMENTAL THREAT SCORE	60	0.00
27. WATERSHED SCORE	100	0.00
28. SW: GW to SW COMPONENT SCORE (Sgs)	100	0.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

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PREScore 4.1
SOIL EXPOSURE PATHWAY SCORESHEET
W.A. Cleary Chemical Corp. - 12/29/99

SOIL EXPOSURE PATHWAY Factor Categories & Factors RESIDENT POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
1. Likelihood of Exposure	550	550
Waste Characteristics		
2. Toxicity	*	1.00E+04
3. Hazardous Waste Quantity	*	10
4. Waste Characteristics	100	18
Targets		
5. Resident Individual	50	0.00E+00
6. Resident Population		
6a. Level I Concentrations	**	0.00E+00
6b. Level II Concentrations	**	0.00E+00
6c. Resident Population (lines 6a+6b)	**	0.00E+00
7. Workers	15	5.00E+00
8. Resources	5	0.00E+00
9. Terrestrial Sensitive Environments	***	0.00E+00
10. Targets (lines 5+6c+7+8+9)	**	5.00E+00
11. RESIDENT POPULATION THREAT SCORE	**	4.95E+04

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

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PREScore 4.1
SOIL EXPOSURE PATHWAY SCORESHEET
W.A. Cleary Chemical Corp. - 12/29/99

SOIL EXPOSURE PATHWAY Factor Categories & Factors NEARBY POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
12. Attractiveness/Accessibility	100	1.00E+01
13. Area of Contamination	100	0.00E+00
14. Likelihood of Exposure	500	0.00E+00
Waste Characteristics		
15. Toxicity	*	1.00E+04
16. Hazardous Waste Quantity	*	10
17. Waste Characteristics	100	18
Targets		
18. Nearby Individual	1	1.00E+00
19. Population Within 1 Mile	**	4.00E+00
20. Targets (lines 18+19)	**	5.00E+00
21. NEARBY POPULATION THREAT SCORE	**	0.00E+00
SOIL EXPOSURE PATHWAY SCORE (Ss)	100	0.60

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.1
AIR PATHWAY SCORESHEET
W.A. Cleary Chemical Corp. - 12/29/99

AIR MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release		
2a. Gas Potential to Release	500	360
2b. Particulate Potential to Release	500	220
2c. Potential to Release	500	360
3. Likelihood of Release	550	360
Waste Characteristics		
4. Toxicity/Mobility	*	2.00E+03
5. Hazardous Waste Quantity	*	10
6. Waste Characteristics	100	10
Targets		
7. Nearest Individual	50	2.00E+01
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	6.30E+01
8d. Population (lines 8a+8b+8c)	**	6.30E+01
9. Resources	5	0.00E+00
10. Sensitive Environments		
10a. Actual Contamination	***	0.00E+00
10b. Potential Contamination	***	1.88E-01
10c. Sens. Environments(lines 10a+10b)	***	1.88E-01
11. Targets (lines 7+8d+9+10c)	**	8.32E+01
AIR MIGRATION PATHWAY SCORE (Sa)	100	3.63E+00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

P-1 4 November 1999
View looking west at site from entrance to facility property.

P-2 4 November 1999
View looking northwest at facility from Route 27, with golf course in foreground and facility office in background.

P-3 4 November 1999
View looking southwest from property entrance at Route 27, with residence in background.

P-4 4 November 1999
View looking northeast from Route 27 at the nearest residence to the facility.

P-5 5 November 1999
View looking southwest at excavation area and former chemical manufacturing building.

P-6 5 November 1999
View looking northwest at former chemical lagoon, with collected rainwater.

P-7 5 November 1999
View looking west former chemical lagoon, showing area vegetation.

P-8 5 November 1999
View looking northwest at housing for groundwater treatment equipment, with spent arsenic filter bags stored in plastic garbage cans.

P-9 5 November 1999
View looking northwest at monitoring wells between boundary of manufacturing facility and golf course.

P-10 5 November 1999
View looking northeast at drainage swale, which bisects the golf course. The culvert was formerly part of the site drainage pattern.

P-11 5 November 1999
View looking southwest at the cemented culvert, which formerly drained overflow liquid from the lagoon.

P-12 5 November 1999
View looking northeast at the food additive manufacturing building.

P-13 5 November 1999
View looking southeast at the food additive manufacturing building.

P-14 5 November 1999
View looking southeast at facility office building and garage.